APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,694	02/11/2004	Dan Matlock	MATLOCK-001	9177

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EXAMINER
AMADIZ, RODNEY

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
06/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/775,694	MATLOCK ET AL.
Office Action Summary	Examiner	Art Unit	
	RODNEY AMADIZ	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>13 March 2008</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>40-51</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>40,41 and 48</u> is/are rejected.

7) ☒ Claim(s) <u>42-47 and 49-51</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claim 40 is rejected under 35 U.S.C. 102(b) as being anticipated by Hoch (U.S. Patent

6,492,963—hereinafter "Hoch").

As to **Claim 40**, Hoch teaches a light emitting display apparatus for displaying a

stationary or animated imaged on a rotating object, such as, for example, a wheel of a vehicle

(Fig. 1 and Col. 5, lines 10-15), the light emitting display apparatus comprising:

a support attachable to the rotating object so as to having the same center of rotation as the

rotating object *(Fig. 1, 101 and Fig. 8, 800)*; a plurality of light emitting elements on said

support and arranged in one or more generally parallel columns *(Fig. 1, 101 and Col. 3, lines 22-

26)*; one or more image maps of an image to be displayed *(Col. 3, lines 64-67)*, each image map

including an array of plurality of columns *(inherent in order to produce an image such as a

message)*; a means for sensing the rotational position of said support about the center of rotation

and generating a signal *(Col. 2, line 59—Col. 3, line 21)*; a microcontroller attached to each of

said plurality of light emitting elements *(Fig. 4A, 202)*, said microcontroller receives said signal

and operates to select an image map and a column from said selected image map in accordance

with said signal and configured to illuminate one or more of said light emitting elements in

accordance with said selected image map, said selected column and said signal *(See Figs. 1, 3A-*

3F and 4A and Col. 2, lines 43-44, Col. 3, lines 15-21 and 64-67 and Col. 4. lines 20-38 and

note that when producing an image, pattern or message, the microprocessor takes into

consideration the speed of the wheel in order to activate the proper light(s) in the respective

column(s)), thereby displaying said image as said support is rotated about the center of rotation

so as to be viewed by humans *(See Figs. 3A-3F)*; and a power source connected to and providing

electrical power to said microcontroller *(Fig. 4A, 201)*.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 41 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in

view of Kowalewski (USPGPUB 2002/0135541—hereinafter "Kowalewski").

        As to **Claim 41**, Hoch teaches said micro controller configured to illuminate one or more

of said light emitting elements in accordance with said selected image map, said selected column

and said signal *(See Figs. 1, 3A-3F and 4A and Col. 2, lines 43-44, Col. 3, lines 15-21 and 64-*

67 and Col. 4. lines 20-38 and note that when producing an image, pattern or message, the

microprocessor takes into consideration the speed of the wheel in order to activate the proper

light(s) in the respective column(s)). Hoch, however, fails to teach that said microcontroller

further operates to define a delay period and is further configured to illuminate one or more of

said light emitting elements in accordance with said delay period. Examiner cites Kowalewski to

teach a microcontroller that operates to define a delay period and illuminates one or more light emitting elements in accordance with said delay period *(Fig. 12 and Pg. 1, ¶ 7, Pg. 2, ¶ 14, Pg. 4, ¶'s 45 and 46, Pg. 7, ¶'s 71 and 76 and Pg. 8, ¶ 90)*. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate a delay period configured to illuminate one or more light emitting elements as taught by Kowalewski in the light emitting display apparatus taught by Hoch in order to adjust the center of the apparent display when viewed from the front of the display *(Kowalewski—Pg. 2, ¶ 14 and Pg. 4, ¶ 45)*.

As to **Claim 48**, Hoch teaches a light emitting display apparatus, comprising: a wheel (Fig. 1, 110) attached to a vehicle *(Fig. 1 and Col. 5, lines 10-15)*; a support attached (101, 102 and 103) to said wheel so as to having the same center of rotation as the rotating object *(Fig. 1, 101 and Fig. 8, 800)*; a plurality of light emitting elements on said support and arranged in one or more generally parallel columns *(Fig. 1, 101 and Col. 3, lines 22-26)*; one or more image maps of an image to be displayed, each image map including an array of plurality of columns *(Col. 3, lines 64-67)*; a means for sensing the rotational position of said support about the center of rotation and generating a signal *(Col. 2, line 59—Col. 3, line 21)*; a microcontroller attached to each of said plurality of light emitting elements *(Fig. 4A, 202)*, said microcontroller receiving said signal and operating to select an image map and a column from said selected image map in accordance with said signal, , said microcontroller configured to illuminate one or more of said light emitting elements in accordance with said selected image map, said selected column and said signal *(See Figs. 1, 3A-3F and 4A and Col. 2, lines 43-44, Col. 3, lines 15-21 and 64-67 and Col. 4, lines 20-38 and note that when producing an image, pattern or message, the microprocessor takes into consideration the speed of the wheel in order to activate the proper*

light(s) in the respective column(s)), thereby displaying said image as said support is rotated about the center of rotation so as to be viewed by humans *(See Figs. 3A-3F)*; and a power source connected to and providing electrical power to said microcontroller *Fig. 4A, 201)*. Hoch, however, fails to teach that said microcontroller further operates to define a delay period and is further configured to illuminate one or more of said light emitting elements in accordance with said delay period. Examiner cites Kowalewski to teach a microcontroller that operates to define a delay period and illuminates one or more light emitting elements in accordance with said delay period *(Fig. 12 and Pg. 1, ¶ 7, Pg. 2, ¶ 14, Pg. 4, ¶'s 45 and 46, Pg. 7, ¶'s 71 and 76 and Pg. 8, ¶ 90)*. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to incorporate a delay period configured to illuminate one or more light emitting elements as taught by Kowalewski in the light emitting display apparatus taught by Hoch in order to adjust the center of the apparent display when viewed from the front of the display *(Kowalewski—Pg. 2, ¶ 14 and Pg. 4, ¶ 45)*.

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Allowable Subject Matter

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5.   Claims 42-47 and 49-51 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6.   The following is a statement of reasons for the indication of allowable subject matter: As to Claims 42, 45 and 49 the prior art fails to teach or suggest, either alone or in combination that "said microcontroller determines the rotational frequency of said support from said signal and from said rotational frequency determines the linear velocity of the object to which said support

is attached, and wherein said image is of a speedometer which dynamically displays said linear velocity.".

As to Claims 43, 46 and 50 the prior art fails to teach or suggest, either alone or in combination that "said microcontroller determines the rotational acceleration of said support from said signal and from said rotational acceleration determines the linear acceleration of the object to which said support is attached, and wherein said image is of an accelerometer which dynamically displays said linear acceleration."..

As to Claims 44, 47 and 51 the prior art fails to teach or suggest, either alone or in combination that "said microcontroller is encoded with the radius of the wheel and the vehicle mass to which the vehicle wheel is mounted, and further wherein said microcontroller determines the rotational acceleration of said support from said signal and from said rotational acceleration determines the linear acceleration of the wheel, and then using said linear acceleration determines the power of the vehicle using the said linear acceleration, the vehicle mass, and the radius of the wheel, and further wherein said image is of a vehicle instrumentation which dynamically displays the determined power of the vehicle.".

Response to Arguments

7.   Applicant's arguments filed March 13, 2008 have been fully considered but they are not persuasive. The Applicant argues that "[Hoch] is deficient in its disclosure to include one or more image maps of an image to be displayed, each image map including an array of plurality of columns. Further since Hock is deficient in this manner, the microprocessor of Hoch does not operate to select an image map and a column from the selected image map in accordance with

the signal and is not configured to illuminate one or more of the light emitting elements in

accordance with the selected image map, the selected column and the signal. It is important to

note, the one or more image maps of an image to be displayed, and the plurality of columns of

each map is not [the] same as the array of lights as described in Hoch". The Examiner

respectfully disagrees. Hoch teaches three supports (101-103) each having a plurality of light

emitting elements (See Fig. 1). Hoch also teaches a memory connected to the microprocessor

that stores patterns, images and messages (Col. 3, lines 64-67). These patterns, images and

messages represent an image map. For example, figure 3D illustrates the display apparatus

displaying "HOKEY SPOKES!!!". In order to display this image the memory uses an image

map. To further clarify, when forming the "H" in the image "HOKEY SPOKES!!!" the memory

utilizes the image map and sends it to the microprocessor in pieces (i.e. it breaks down the image

into columns); thereby the "H" is broken down into "|", "—" and "|". To better illustrate, the

Examiner will only use one support (101). At time t1 the microprocessor illuminates all of the

LED's on 101 to form "|", at times t2-t3, the microprocessor illuminates only the middle LED on

101 to form "—" and at time t4 the microprocessor illuminates all of the LED's on 101 to form

"|". Using Persistence of Vision, the viewer will be able to perceive an "H".

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Siegel et al.   USPGPUB 2004/016127

   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RODNEY AMADIZ whose telephone number is (571)272-7762. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629

/R. A./
Examiner, Art Unit 2629
6/21/08